

REMARKS

This Amendment After Final Rejection is submitted in response to the outstanding final Office Action, dated January 3, 2008. The present application was filed on February 22, 2002 with claims 1 through 26. Claims 1, 3, and 18-26 were cancelled in 5 the Amendment and Response to Office Action dated April 13, 2007. Claims 2 and 4-17 are presently pending in the above-identified patent application. Claims 4, 16, and 17 are proposed to be amended herein.

This amendment is submitted pursuant to 37 CFR §1.116 and should be entered. The Amendment places all of the pending claims, i.e., claims 2 and 4-17, in a 10 form that is believed allowable, and, in any event, in a better form for appeal. It is believed that examination of the pending claims as amended, which are consistent with the previous record herein, will not place any substantial burden on the Examiner.

In the Office Action, the abstract was objected to due to indicated 15 informalities, and claims 2 and 4-17 were rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.

Formal Objections

The abstract was objected to due to indicated informalities. In particular, the Examiner asserts that the abstract is missing punctuation marks.

Applicants have reviewed the abstract submitted in the previous response 20 and have found no missing punctuation marks. In any case, the Abstract has been amended to add the punctuation cited by the Examiner.

Section 101 Rejection

Claims 1-17 and 26 were rejected under 35 U.S.C. §101 because the 25 claimed invention is directed to non-statutory subject matter. In particular, the Examiner asserts that the claimed invention does not “transform” an article or physical object to a different state or thing because it merely identifies patterns in sequences. The Examiner asserts that this does not preclude patentability, but asserts that at least one embodiment does not produce a tangible result. Furthermore, the Examiner asserts that converting one set of data to another set of data is not considered as a physical transformation because it 30 does not represent transformation of an article or physical object to a different state or

thing, and it does not represent physical activities. The Examiner asserts that the claims do not use the final result or make it available to be used by a user.

The Supreme Court has stated that the "[t]ransformation and reduction of an article 'to a different state or thing' is the clue to patentability of a process claim."

5 Gottschalk v. Benson, 409 U.S. 63, 70, 175 U.S.P.Q. (BNA) 676 (1972). In other words, claims that require some kind of transformation of subject matter, which has been held to include intangible subject matter, such as data or signals, that are representative of or constitute physical activity or objects have been held to comply with Section 101. See, for example, *In re Warmerdam*, 31 U.S.P.Q.2d (BNA) 1754, 1759 n.5 (Fed. Cir. 1994) or

10 *In re Schrader*, 22 F.3d 290, 295, 30 U.S.P.Q.2d (BNA) 1455, 1459 n.12 (Fed. Cir. 1994).

Thus, as expressly set forth in each of the independent claims, the claimed methods or system describe pattern discovery on an input sequence and transform an input sequence to derive a plurality of concatenated motifs, or transform motifs to derive redundant motifs. This transformation to concatenated or redundant motifs provides a useful, concrete and tangible result.

Regarding the Examiner's assertion that the claimed invention does not "transform" an article or physical object to a different state or thing because it merely identifies patterns in sequences, Applicants note that the claimed invention creates new motifs.

20 Regarding the Examiner's assertion that the claims do not use the final result or make it available to be used by a user, Applicants note that the independent claims have been amended to require providing at least said at least one new motif as an output.

Applicants believe that these amendments address the Examiner's concerns and submit that each of the claims are in full compliance with 35 U.S.C. §101. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. §101 be withdrawn.

All of the pending claims, i.e., Claims 2 and 4-17, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

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Respectfully submitted,



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